



Safety Data Sheet

Seal Bond FCS-413

Revision Date: November 17, 2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: FCS-413 PART A
 PRODUCT CODES: FCS-413 PART A

MANUFACTURER: Seal Bond
 STREET ADDRESS: 14851 Michael Lane
 CITY, STATE, ZIP: Spring Lake, MI 49456

INFORMATION PHONE: 616-850-0507
 EMERGENCY PHONE: Chemtrec 800-424-9300
 FAX PHONE: 616-850-0530

PREPARED BY: Kelly Barnes

Chemical Name or Class: Epoxy mixture

SECTION 2. HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: Serious eye damage/Eye irritation category 2A, Skin irritation category 2, skin sensitizer category 1, Long term hazards to aquatic environment Category 2

GHS Label Elements and Precautionary Statements:



Label Elements:

Hazard Statements:

- Warning: Causes serious eye irritation.
- Warning: Causes skin irritation
- Warning: May cause an allergic skin reaction
- Toxic to aquatic life with long lasting effects

Precautionary statements:

- P102 Keep out of reach of children.
- P103 Read label before use
- P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
Response
P302 + P352 IF ON SKIN: wash with plenty of soap and water.
P333 + P313 IF SKIN irritation or rash occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P305 + P351 + P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 IF eye irritation persists: Get medical advice/attention.
P391 Collect spillage.
P501 Dispose of contents/container to a waste disposal facility in accordance with local, state, federal or international laws

Other Non-classifiable potential hazards
Carcinogen category 2

HMIS HAZARD CLASSIFICATION

HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0 PERSONAL PROTECTIVE EQUIPMENT: G

POTENTIAL HEALTH EFFECTS

EYES:

MAY CAUSE IRRITATION BUT NO CORNEAL INJURY IS LIKELY.

SKIN:

MAY CAUSE IRRITATION OR ALLERGIC SKIN RESPONSE.

INGESTION:

THIS MATERIAL HAS A PROBABLE LOW ACUTE ORAL TOXICITY.

INHALATION:

NO GUIDE FOR CONTROL KNOWN, HOWEVER, EXPOSURE TO HEATED VAPORS CAN CAUSE IRRITATION TO THE NOSE, THROAT OR MUCOUS MEMBRANES..

HEALTH HAZARDS (ACUTE AND CHRONIC):

EPOXY RESINS CAN CAUSE SENSITIZATION BY EXPOSURE THROUGH CONTACT OR HIGH CONCENTRATION OF VAPOR. EYES: INJURY IF UNLIKELY BUT STAIN FOR EVIDENCE OF CORNEAL INJURY.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

RESPIRATORY CONDITIONS OR OTHER ALLERGIC AILMENTS.

CARCINOGENICITY

OSHA: NO NTP: yes IARC: yes

ADDITIONAL CARCINOGENICITY INFORMATION:

Some colors may contain carbon black - Explanation Of Carcinogenicity for carbon: IARC MONOGRAPHS ON EVALUATION OF CARCINOGENIC RISK OF CHEMICALS TO MAN, VOL 65, PG 149, 1996: GROUP 2B. Titanium Dioxide is listed by IARC as possibly carcinogenic to humans (group 2B).

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO.	OSHA PEL	ACGIH TLV	OSHA STEL	WEIGHT %
MODIFIED DIGLYCIDYL ETHER OF					
BISPENOL A	25068-38-6	NONE	NONE	NONE	30-60
ALKYL GLYCIDYL ETHER	68609-97-2	NONE	NONE	NONE	10-30
BISPHENOL F/EPICHLOROHYDRIN EPOXY RESIN					
	9003-36-5	NONE	NONE	NONE	10-30
Siloxanes and silicones, di-me reactions products with silica (non-hazardous)					
	67762-90-7	none	none	none	0.1-1.0
siloxanes and silicones, di-methyl (non-hazardous)					
	63148-62-9	none	none	none	0.1-1.0
STODDARD SOLVENT	8052-41-3	100ppm	100 ppm	NONE	0.1-1.0
1-Methoxy-2-Propanol Acetate	108-65-6	50ppm	NONE	NONE	0.1-1.0
*1,2,4-Trimethylbenzene	95-63-6	25ppm	NONE	NONE	(0.5%)
Additive	NJTSRN 800963-5023	none	none	none	0.1-1.0
Solvent naphtha, petroleum, heavy aromatic	64742-94-5	NONE	NONE	NONE	0.1-1.0
PROPYLENE GLYCOL MONOMETHYL ETHER	107-98-2	100 ppm	100 ppm	150 ppm	3-7
MICA	12001-26-2	80MG/M3	3MG/M3	NONE	10-30
TIN OXIDE	18282-10-5	2MG/M3	2MG/M3	NONE	3-7
*ANTIMONY	7440-36-0	0.5MG/M3	0.5MG/M3	NONE	<1.0%
AMORPHOUS SILICA	7631-86-9	80MG/M3	10MG/M3	3MG/M3-8HR	1-5

COLORS MAY CONTAIN @ 1-5%:

Titanium Dioxide	13463-67-7	10mg/m3	10mg/m3	5mg/m3	
*CARBON	1333-86-4	3.5PPM	3.4PPM	NONE	<1.0
Silicon Dioxide	7631-86-9	6mg/m3	10mg/m3	NONE	
Ferric Oxide	1309-37-8	10mg/m3	8mg/m3	NONE	
Iron III oxide	20344-49-4	15mg/m3	5mg/m3	NONE	
Yellow Pigment	Not available	NONE	NONE	NONE	
Zinc Sulfate (component of yellow pigment)					
	1314-98-3	NONE	NONE	NONE	
Barium Sulfate (component of yellow pigment)					
	7727-43-7	NONE	NONE	NONE	
Pigment yellow 65 (component of yellow pigment)					
	6528-34-3	NONE	NONE	NONE	
C.I. Pigment Blue	147-14-8	1mg/m3	1mg/m3	NONE	
Aluminum Oxide	1344-28-1	15mg/m3	10mg/m3	NONE	
Iron Oxide Yellow	51274-00-1	15mg/m3	10mg/m3	NONE	

SECTION 3 NOTES: *Indicates toxic chemical(s) subject to reporting requirements of section 313 of Title III and of 40 CFR 372.

Note: Ingredients listed without percentages, the percentages are considered a trade secret.

SECTION 4. FIRST AID MEASURES

EYES:

FLUSH EYES WITH WATER FOR AT LEAST FIFTEEN MINUTES AND CONSULT A PHYSICIAN.

SKIN:

SKIN CONTACT WILL NORMALLY CAUSE NO MORE THAN IRRITATION BUT WASH AFFECTED AREA WITH SOAP AND WATER AND REMOVE CONTAMINATED CLOTHING PROMPTLY.

INGESTION:

LOW IN TOXICITY, INDUCE VOMITING ONLY IF LARGE AMOUNTS OF MATERIAL ARE INGESTED, AND OTHERWISE DO NOT INDUCE VOMITING. IN EITHER CASE CONSULT WITH A PHYSICIAN.

INHALATION:

REMOVE VICTIM TO FRESH AIR AND ADMINISTER OXYGEN IF NECESSARY.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

SECTION 5. FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: not available
(% by volume) LOWER: not available

FLASH POINT: 200+F

METHOD USED:

SETA FLASH

EXTINGUISHING MEDIA:

FOAM, ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG

SPECIAL FIRE FIGHTING PROCEDURES:

DO NOT ENTER CONFINED AREA WITHOUT FULL BUNKER GEAR INCLUDING A POSITIVE PRESSURE NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL ALL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE KNOWN.

SECTION 6. RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

WEAR RESPIRATOR AND PROTECTIVE CLOTHING. SHUT OFF THE SOURCE AT THE LEAK. REMOVE EXCESS WITH VACUUM TRUCK AND TAKE UP THE REMAINDER WITH AN ABSORBENT SUCH AS CLAY AND PLACE IN DISPOSAL CONTAINERS. FLUSH AREA WITH WATER TO REMOVE RESIDUE.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

STORE IN A COOL DRY PLACE. SEAL ALL PARTIALLY USED CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. MIXED MATERIALS CONTAIN THE HAZARDS OF ALL THE COMPONENTS, THEREFORE, READ THE MSDS'S OF ALL THE COMPONENTS PRIOR TO USING MATERIAL. PROPERLY LABEL ALL CONTAINERS

OTHER PRECAUTIONS:

AVOID ALL SKIN CONTACT. AVOID BREATHING VAPORS GENERATED FROM THE MATERIAL. OBSERVE CONDITIONS OF GOOD GENERAL HYGIENE AND SAFE WORKING PRACTICES. CONTAMINATED LEATHER ARTICLES CAN NOT BE CLEANED AND MUST BE DISCARDED IF CONTAMINATED WITH THIS PRODUCT. WASH ALL CONTAMINATED CLOTHING PRIOR TO THE REUSE THEREOF

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

USE A NIOSH APPROVED RESPIRATOR AS REQUIRED TO PREVENT OVER EXPOSURE TO VAPOR IN ACCORDANCE WITH 29 CFR 1910.134. GENERAL EXHAUST IS USUALLY SUFFICIENT IN LIEU OF NIOSH RESPIRATOR

VENTILATION :

GENERAL EXHAUST IS USUALLY SUFFICIENT TO CONTROL VAPORS AND EXPOSURE HAZARDS

PROTECTIVE GLOVES:

IMPERVIOUS GLOVES – NEOPRENE OR RUBBER

EYE PROTECTION:

SPLASH GOGGLES OR GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

WEAR BODY COVERING CLOTHING AND OTHER COVERINGS AS NECESSARY SUCH AS APRON AND APPROPRIATE FOOTWEAR TO AVOID CONTACT WITH MATERIAL.

WORK HYGIENIC PRACTICES:

OBSERVE GOOD GENERAL HYGIENIC PRACTICES.

SEE SECTION THREE FOR OCCPATONAL EXPOSURE LIMIT VALUES

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: LOW VISCOSITY LIQUID IN VARYING COLORS

BOILING POINT OR RANGE: 200 TO 315F

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H₂O = 1): 1.2

EVAPORATION RATE: N/A

SOLUBILITY IN WATER: NEGLIGIBLE

Odor Threshold: N/A

pH: N/A

Melting point/freezing point: N/A

Vapor Pressure: N/A

Auto Ignition Temperature: N/A

Partition Coefficient: n-octanol/water: N/A

Decomposition Temperature: N/A

SECTION 10. STABILITY AND REACTIVITY

STABILITY:

STABLE

CONDITIONS TO AVOID (STABILITY):

AVOID EXCESSIVE HEAT OR OPEN FLAMES.

INCOMPATIBILITY (MATERIAL TO AVOID):

CAN REACT VIGOROUSLY WITH STRONG OXIDIZING AGENTS AND STRONG LEWIS ACIDS OR MINERAL ACIDS.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

CO₂, ALDEHYDES, ACIDS. REACTION WITH SOME CURING AGENTS CAN GENERATE LARGE AMOUNTS OF HEAT.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR.

SECTION 11. TOXICOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component CAS# 25068-38-6: Moderate sensitizer, slight eye irritant, moderate skin irritant, Oral LD50 >5000 mg/kg (rat), Dermal LD50 >6000 mg/kg (rabbit)

Component CAS# 68609-97-2: possible sensitizer, eye and skin irritant, Oral LD50 >10000 mg/kg (rat), Inhalation LD50 – no microscopic changes

Component CAS# 8052-41-3: Draize test (rabbit) eye: 500 mg/24hr – Moderate. Epidemiology: Studies involving petroleum refinery workers indicate that persons with routine exposure to petroleum based constituents may be at an increased risk to the development of benign neoplasms, digestive tract cancer and skin cancer. LD50 oral >6000 mg/kg (rat). Dermal LD50 >3000 mg/kg (rabbit). Inhalation LC50 = 5500 mg/kg (4 hr) (rat). Component is a moderate skin irritant. Product is an eye irritant.

Component CAS# 108-65-6: Oral LD50 = 8532 mg/kg (rat). Dermal LD50 >5000 mg/kg (rabbit). Inhalation LC50 >100ppm (4hr) (rat) Component is a moderate skin irritant. Product is an eye irritant

Component CAS# 95-63-6: Oral LD50 (rat) = 5000 mg/kg. Inhalation LC50 (rat) -4h = 18000 mg/m3.

Component additive NJTSRN 800963-5023: Acute oral toxicity: LD50 rat>8,000,000 mg/kg; skin irritation rabbit – no skin irritation

Component CAS# 64742-94-5: LD50/LC50: Draize test, rabbit, skin: 500 uL/24H Mild; Inhalation, rat: LC50 = >590 mg/m3/4H; Skin, rabbit: LD50 = >2 mL/kg;

Epidemiology: Epidemiological studies involving petroleum refinery workers indicate persons with routine exposure to petroleum or one of its constituents may be at an increased risk to the development of benign neoplasms, digestive tract cancer, and skin cancer.

Component BISPHENOL F/EPICHLOROHYDRIN EPOXY RESIN CAS# 9003-36-5: Acute Oral Effects: LD50 (rat) >5000 mg.kg. Acute Dermal Toxicity (rabbit) >3000 mg/kg. Inhalation toxicity LC50 (rat) >1.7 mg/l air for a 4-hr aerosol exposure (maximum concentration obtained). Sensitization (guinea pig) causes sensitization. Skin Irritation (rabbit) Causes moderate irritation. Eye irritation (rabbit) Causes slight irritation.

Component CAS# 107-98-2: Ingestion LD50 rat 4016 mg/kg, Dermal LD50 rabbit >2000 mg/kg, Inhalation LC50 6 hr Vapor, rat >25.8 mg/l. May cause eye or skin irritation. May effect Kidney or liver. Has been reported to be toxic to fetus in laboratory animals.

Component Titanium Dioxide: Inhalation 4 h LC50 > 6.82 mg/l; Oral LD50 > 5000 mg/kg, rat; In February 2006, IARC listed titanium dioxide as possibly carcinogenic to humans Group 2B.

Component Iron III oxide CAS# 20344-49-4: Acute Oral Toxicity LD50 >5000 mg/kg (rat).

Component Carbon: IARC lists carbon as a possible human carcinogen Category 2B. LD50 – Intravenous, mouse = 440 mg/kg

Component Yellow Pigment: Not Hazardous as defined by OSHA HC Standard 29 CFR 1810.1200.. Acute oral value of 20 gm/kg or greater in rats

Component Antimony CAS# 7440-36-0: Oral LD50 7000 mg/kg (rats). The Antimony component of this product exists as a solid solution in tin oxide wherein Antimony ions substitute for tin in the lattice. Repeated exposure of animals by ingestion of Antimony caused reduced weight gain, blood effects and injury to heart muscles.

In humans, prolonged or chronic exposure to antimony fumes or dust may cause skin postules, bleeding gums, conjunctivitis, laryngitis, headache, weight loss, anemia, pain or tightness in chest, shortness of breath, metallic taste and decreased sense of smell.

Component CAS# 7631-86-9: Oral LD50 >7500 mg/kg (rats)

Component amorphous silica CAS#7631-86-9: Toxic effects described in animals exposed by inhalation of high levels of amorphous silica include pulmonary changes, or mild fibrosis, reversible inflammation, vascular obstruction, emphysema, alveolar dust deposition and lung effects.

SECTION 12. ECOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component CAS# 25068-38-6: Biodegradability (Modified Sturm Method) 12%, Fish toxicity: Rainbow trout (96hr) LC50 1.5mg/l, Zebra Fish (96hr) LC50 2.4 mg/l. Invertebrate Toxicity: Daphnia Toxicity (24hr) EC 50 3.6 mg/l

Component CAS# 95-63-6: Toxicity to fish LC50 (fathead minnow) 7.72 mg/l 96 hr. Toxicity to daphnia and other aquatic invertebrates: Immobilization EC50 (water flea) 3.6mg/l 48hr.

Component CAS@ 107-98-2: Bioconcentration potential is low (BCF less than 100). Potential for mobility in soil is high (KOC between 0 and 50). Material is readily biodegradable and is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100mg/l in the most sensitive species tested.. LC50 fathead minnow 96 hr 20800 mg/l, LC50 water flea 48 hr lethally 23300 mg/l, EbC50 green algae biomass growth inhibition 7 d >1000 mg/l. Toxicity to microorganisms IC50 activated sludge > 1000 mg/l

Component Titanium Dioxide: Pimephales promelas (fathead minnow) < 1000 mg/l @ 96h LC50; Pseudokirchneriella subcapitata (green algae) 61 mg/l @ 72h EC50; Daphnia magna (water flea) > 1000 mg/l @ 48h EC50

Component Iron III oxide CAS# 20344-49-4: Acute and Prolonged Toxicity to fish LCO >1000 mg/l (golden Orfe). Toxicity to Microorganisms ECO > 10000mg/l (pseudomonas putida)

Component Yellow Pigment: Not Hazardous as defined by OSHA HC Standard 29 CFR 1810.1200.

Component Antimony CAS# 7440-36-0: Antimony is moderately toxic (96 hr LC50 1-50 mg/l) The 96 hr LC50 in sheephead minnows is > 6.2 < 8.3 ppm.

SECTION 13. WASTE DISPOSAL

WASTE DISPOSAL METHOD:.

DISPOSE OF THE MATERIAL IN A WASTE DISPOSAL SITE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAW.

SECTION 14. Transport Information

DOT: Not Regulated

IMO/IMDG: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (CONTAINS Bisphenol A Diglycidyl Ether Polymer), 9, PGIII, Marine Pollutant

SECTION 15: REGULATORY INFORMATION

No data for the product itself.

Component data:

CAS# 25068-38-6: Considered a hazardous chemical; is on the TSCA list; is on the DSL Canada, WHMIS class D2B; Is on the New Jersey Right to Know list,; is on the PA Right to Know List;

Component CAS# 68609-97-2: Considered a hazardous chemical; is on the TSCA list; is on the DSL Canada, Is on the New Jersey Right to Know list; is on the PA Right to Know List.

Component CAS# 8052-41-3: Component is on the TSCA and Canada DSL lists. Component is on the Pennsylvania, California, New Jersey Massachusetts and Minnesota right to know lists.

Component CAS# 108-65-6: Listed on TSCA and DSL

Component CAS# 95-63-6: This component is subject to SARA Title III Section 313 reporting. This component is in the TSCA and Canada DSL Lists. This component is on the Massachusetts, Pennsylvania, New Jersey right to know lists.

Siloxanes and silicones, di-me reactions products with silica: Included on TSCA, EINECS, MITI, ACOIN, and Canadian DSL inventory or lists. siloxanes and silicones, di-methyl: Included on TSCA, EINECS, MITI, ACOIN, and Canadian DSL inventory or lists.

Component additive NJTSRN 800963-5023: on TSCA List. Not a California Prop 65 chemical

Component CAS# 64742-94-5. is on the TSCA and Canada DSL lists.

Component BISPENOL F/EPICHLOROHYDRIN EPOXY RESIN CAS# 9003-36-5: Component is on the TSCA and Canada DSL lists. Component is on the New Jersey and Pennsylvania right to know lists

Component CAS# 107-98-2; on the PA right to know list. Product is on the TSCA list and DSL Canada

Component tin oxide CAS# 18282-10-5 and Antimony CAS# 7440-36-0:. The Antimony-tin oxide matrix in this product is very insoluble. EPA toxicity characteristic leaching procedure (TCLP) leaching tests have shown that less than 2 mg/l antimony and less than 0.5 mg/l tin are released from this product. FDA extraction tests have shown that less than 2 ppm antimony and less than 40ppm of tin are released from this material. Components are on the TSCA list and Canada DSL

Component Antimony CAS# 7440-36-0: is regulated as a toxic chemical under section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Component CAS# 12001-26-2: On TSCA list. DSL Canada Listed and is considered an uncontrolled product. Although not on the California Proposition 65 list, it may contain ppm quantities of materials regulated under California's safe drinking water and toxic enforcement act of 1986.

Component CAS# 7631-86-9: Component is on the Minnesota right to know list. Component is on TSCA list and Canada DSL.

Component Titanium Dioxide: Contains Proposition 65 Chemicals, is on the PA Hazardous substance list, is on the NJ right to know Regulated chemical List. Titanium Dioxide is on inventory or in compliance with EINECS, TSCA, AICS, DSL, ENCS (JP), KECI (KR), PICCS (PH) and INV (CN).

Component Carbon: Contains Proposition 65 Chemicals .Carbon: is listed on TSCA and DSL Canada

Component CAS# 1309-37-8: Component is on the TSCA list and Canada DSL.

Component Iron III oxide CAS# 20344-49-4: Listed on TSCA Inventory. Potential exposure to all of the California proposition 65 chemicals have been determined to be below the No significant risk level (NSRL). Components are on the Pennsylvania right to know substance list.

Component contains the following chemicals listed on the Pennsylvania RTK special hazardous Substance lists: chromium CAS# 7440-47-3 (0.02%) and nickel CAS# 7440-02-0 (0.015%). Component contains the following ingredients which are on the Massachusetts hazardous substance lists: Chromium CAS# 7440-47-3 (0.02%), arsenic CAS# 7440-38-2 (60ppm), Beryllium CAS# 7440-41-7 (1ppm) and Nickel CAS# 7440-02-0 (0.015%) Component contains the following chemicals on the California Proposition 65 list known to the state of California to be carcinogenic: Nickel CAS# 7440-02-0 (0.015%), arsenic CAS# 7440-38-2 (60ppm), Beryllium CAS# 7440-41-7 (1ppm) and Cobalt CAS# 7440-48-4 (70ppm)..

Component Yellow Pigment: Not Hazardous as defined by OSHA HC Standard 29 CFR 1810.1200.

Component CAS# 147-14-8: Component is on the TSCA List. and not controlled under WHMIS. Component is a CERCLA hazardous substance

Component CAS# 1344-28-1: Component is on the Massachusetts, New Jersey, Pennsylvania right to know lists. Component is on TSCA list and Canada DSL.

Component CAS# 51274-00-1: Component is on the TSCA list and Canada DSL.

SECTION 16. OTHER INFORMATION

DISCLAIMER: The information Contained herein is based on the data available and is believed to be accurate, However, the manufacturer makes no warranty expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Accordingly, we assume no responsibility for injury from the use of this product.

N/A = Not Available

See Section 1 for date of preparation



Safety Data Sheet

Seal Bond FCS-413

Revision Date: November 17, 2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: FCS-413 PART B
PRODUCT CODES: FCS-413 PART B

MANUFACTURER: Seal Bond
STREET ADDRESS: 14851 Michael Lane
CITY, STATE, ZIP: Spring Lake, MI 49456

INFORMATION PHONE: 616-850-0507
EMERGENCY PHONE: Chemtrec 800-424-9300
FAX PHONE: 616-850-0530

PREPARED BY: Kelly Barnes

Chemical Name or Class: Polyamine mixture

SECTION 2. HAZARDS IDENTIFICATION

Hazard Overview

GHS Classification: : Acute oral toxicity category 4, Specific target organ toxicity following repeated exposure category 2, Skin corrosion/irritation category 1, skin sensitizer category 1B, Serious eye damage category 1, Acute toxicity inhalation category 4, Acute hazard to aquatic environment category 2, Chronic hazards to aquatic environment category 2

GHS Label Elements and Precautionary Statements:



Label Elements:

Hazard Statements:

Warning: Harmful if swallowed

Warning: May cause damage to organs through prolonged or repeated exposure (skin, central nervous system (CNS) .

Danger: Causes Severe skin burns and eye damage

Warning: May cause an allergic skin reaction

Danger: Causes serious eye damage.

Warning: Harmful if inhaled

Warning: Suspected of damaging the fertility of the unborn child.

Toxic to aquatic life

Toxic to aquatic life with long lasting effects

Precautionary statements:

P102 Keep out of reach of children.

P103 Read label before use

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P260 Do not breathe dust/fume/gas/mist/vapours/spray

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P272 Contaminated work clothing should not be allowed out of the workplace.

P271 Use only outdoors or in a well-ventilated area

P273 Avoid release to the environment.

Response;

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P363 Wash contaminated clothing before reuse.

P304 + P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

P310 Immediately call a POISON CENTER or doctor/physician.

P321 If skin irritation or burns develop, Call a doctor/physician .

P305 + P351 + P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301 + P312 IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell.

P330 Rinse mouth.

P314 Get medical advice/attention if you feel unwell.

P305 + P351 + P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 If in eyes, immediately call a POISON CENTER or doctor/physician.

P302 + P352 IF ON SKIN: wash with plenty of soap and water.

P333 + P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

P362 + P364 take off contaminated clothing and wash it before reuse.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/container to a waste disposal facility in accordance with local, state, federal or international laws.

Other Non-classifiable potential hazards

Germ cell mutagenicity category 2

HMIS HAZARD CLASSIFICATION

HEALTH: 2 FLAMMABILITY: 1 REACTIVITY: 0 PERSONAL PROTECTIVE EQUIPMENT: G

POTENTIAL HEALTH EFFECTS

EYES:

WILL CAUSE BURNS TO THE EYES. HIGH VAPOR CONCENTRATIONS CAN CAUSE SEVERE IRRITATION TO THE EYES.

SKIN:

WILL CAUSE BURNS TO THE SKIN.

INGESTION:

LIQUID CAN CAUSE SEVERE DAMAGE TO MUCOUS MEMBRANES IF SWALLOWED.

INHALATION:

HIGH CONCENTRATIONS OF VAPOR CAN CAUSE IRRITATION TO THE RESPIRATORY TRACT, NAUSEA, AND DIZZINESS.

HEALTH HAZARDS (ACUTE AND CHRONIC):

PROLONGED OR REPEATED EXPOSURE MAY CAUSE ASTHMA AND SKIN SENSITIZATION OR OTHER ALLERGIC RESPONSES.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

RESPIRATORY CONDITIONS OR OTHER ALLERGIC AILMENTS.

CARCINOGENICITY

OSHA: NO NTP: NO IARC: NO

ADDITIONAL CARCINOGENICITY INFORMATION:

NO LISTED INGREDIENTS OF THIS PRODUCT ARE REGULATED AS CARCINOGENS.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>OSHA STEL</u>	<u>WEIGHT %</u>
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BENZYL ALCOHOL	100-51-6	NONE	NONE	NONE	10-30
3-Aminomethyl-3,5,5-Trimethyl Cyclohexane	2855-13-2	NONE	NONE	NONE	10-30
NONYL PHENOL	84852-15-3	NONE	NONE	NONE	10-30
M-XYLENE DIAMINE	1477-55-0	NONE	.1mg/m3	NONE	10-30
BENZENEMETHANAMINE, N,N-DIMETHYL-BENZYL DIMETHYLAMINE	103-83-3	NONE	NONE	NONE	1-5
accelerator	NJTSRN 29943300001-5715P	NONE	NONE	NONE	1-5
MICA	12001-26-2	80MG/M3	3MG/M3	NONE	10-30
TIN OXIDE	18282-10-5	2MG/M3	2MG/M3	NONE	1-5
*ANTIMONY	7440-36-0	0.5MG/M3	0.5MG/M3	NONE	<1.0%
AMORPHOUS SILICA	7631-86-9	80MG/M3	10MG/M3	3MG/M3-8HR	1-5

*INDICATES TOXIC CHEMICAL(S) SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III AND OF 40 CFR 372.

Note: Ingredients listed without percentages, the percentages are considered a trade secret.

SECTION 4. FIRST AID MEASURES

EYES:

IMMEDIATELY FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES WHILE LIFTING UPPER AND LOWER LIDS. GET IMMEDIATE MEDICAL ASSISTANCE.

SKIN:

FLUSH SKIN WITH WATER FOR AT LEAST 15 MINUTES AND REMOVE ALL CONTAMINATED CLOTHING IMMEDIATELY. GET MEDICAL ATTENTION IF REDDENING OR SWELLING OCCURS.

INGESTION:

DO NOT INDUCE VOMITING. DILUTE BY GIVING WATER OR MILK TO DRINK IF VICTIM IS CONSCIOUS. GET MEDICAL ATTENTION IMMEDIATELY.

INHALATION:

REMOVE TO FRESH AIR IF EFFECTS PERSIST AND ADMINISTER OXYGEN IF NECESSARY.

SECTION 5. FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: not available
(% by volume) LOWER: not available

FLASH POINT: 230+F

METHOD USED:

SETA FLASH

EXTINGUISHING MEDIA:

FOAM, ALCOHOL FOAM, CO2, WATER FOG

SPECIAL FIRE FIGHTING PROCEDURES:

TOXIC FUMES WILL BE EVOLVED WHEN THIS MATERIAL IS INVOLVED IN A FIRE. A SELF-CONTAINED BREATHING APPARATUS SHOULD BE AVAILABLE FOR FIRE FIGHTING. COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NONE KNOWN.

SECTION 6. RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

AVOID CONTACT WITH MATERIAL. WEAR THE APPROPRIATE SAFETY EQUIPMENT. STOP SPILL AT SOURCE, DYKE AREA TO PREVENT SPREADING. PUMP LIQUID TO SALVAGE TANK. TAKE UP REMAINDER WITH CLAY OR OTHER ABSORBENT AND PLACE IN DISPOSAL CONTAINERS.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

AVOID ALL SKIN CONTACT. AVOID BREATHING VAPORS. RESEAL PARTIALLY USED CONTAINERS. PROPERLY LABEL ALL CONTAINERS. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING, OR USING TOILET FACILITIES. OBSERVE CONDITIONS OF GOOD INDUSTRIAL HYGIENE AND SAFE WORKING PRACTICES.

OTHER PRECAUTIONS:

MIXED MATERIALS CONTAIN THE HAZARDS OF ALL THE COMPONENTS, THEREFORE, READ THE MSDS OF ALL COMPONENTS TO BECOME FAMILIAR WITH ALL HAZARDS PRIOR TO USING THIS PRODUCT.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

NIOSH APPROVED RESPIRATOR PROTECTION REQUIRED IN THE ABSENCE OF PROPER ENVIRONMENTAL CONTROLS. FOR EMERGENCIES A SELF-CONTAINED BREATHING APPARATUS OR A FULL FACE RESPIRATOR IS RECOMMENDED.

VENTILATION:

AVOID BREATHING VAPORS. VENTILATION MUST BE SUFFICIENT TO CONTROL VAPORS.

PROTECTIVE GLOVES:

IMPERVIOUS GLOVES – NEOPRENE OR RUBBER

EYE PROTECTION:

SPLASH GOGGLES OR GLASSES WITH SIDE SHIELDS.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

WEAR BODY COVERING CLOTHING AND OTHER COVERINGS AS NECESSARY SUCH AS APRON AND APPROPRIATE FOOTWEAR TO AVOID CONTACT WITH MATERIAL.

WORK HYGIENIC PRACTICES:

OBSERVE GOOD GENERAL HYGIENIC PRACTICES.

SEE SECTION THREE FOR OCCPATONAL EXPOSURE LIMIT VALUES.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: AMBER CLEAR LIQUID WITH AMINE ODOR.

BOILING POINT OR RANGE: 401-560 F

VAPOR DENSITY (AIR = 1): N/A

SPECIFIC GRAVITY (H₂O = 1): 1.1

EVAPORATION RATE: N/A

SOLUBILITY IN WATER: NEGLIGIBLE

Odor Threshold: N/A

pH: N/A

Melting point/freezing point: N/A

Vapor Pressure: N/A

Auto Ignition Temperature: N/A

Partition Coefficient: n-octanol/water: N/A

Decomposition Temperature: N/A

SECTION 10. STABILITY AND REACTIVITY

STABILITY:

STABLE

CONDITIONS TO AVOID (STABILITY):

AVOID EXCESSIVE HEAT OR OPEN FLAMES.

INCOMPATIBILITY (MATERIAL TO AVOID):

CAN REACT VIGOROUSLY WITH STRONG OXIDIZING AGENTS AND STRONG LEWIS ACIDS OR MINERAL ACIDS.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:

CO₂, ALDEHYDES, ACIDS. REACTION WITH SOME CURING AGENTS CAN GENERATE LARGE AMOUNTS OF HEAT.

HAZARDOUS POLYMERIZATION:

WILL NOT OCCUR

SECTION 11. TOXICOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component CAS# 1477-55-0:

Draize test, rabbit, eye: 50 ug/24H Severe;

Draize test, rabbit, skin: 750 ug/24H Severe;

Inhalation, rat: LC50 = 700 ppm/1H;

Oral, rat: LD50 = 930 mg/kg;

Skin, rabbit: LD50 = 2 gm/kg;
Component 3-Aminomethyl-3,5,5-Trimethyl Cyclohexane: Oral LD50 rat 1030 mg/kg, Skin irritation – Corrosive subcategory 1C where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days. Eye irritation – Risk of serious damage to eyes. Product Sensitization (Magnusson- Kigman test) guinea pig: may cause sensitization by skin contact. Product Teratogenicity oral rat NOEL (no observed effect level) 250 mg/kg
Component benzyl Alcohol: Inhalation LC50 (4hr) >4178 mg/l (rat), Dermal LD50 2000 mg/kg (rabbit) Rats exposed to 800 mg/kg for thirteen weeks exhibited CNS depression and histopathological changes in the brain, thymus and skeletal muscles. The No observed Adverse effect level (NOAEL) was 400 mg/kg. No evidence of carcinogenicity was seen in two year study with rats and mice.
Component Nonyl Phenol: Median Lethal Dose Oral: LD50 0.58g/kg (rat) moderately toxic. Dermal LD50 2.14g/kg (rabbit) slightly toxic. Skin Draize Test, rabbit,: 500 mg/m³ 24hr – corrosive. Eyes Draize test rabbit, 57.00/110 – extremely irritating. Component is a possible risk of impaired fertility.
Component CAS# 103-83-3 Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Corrosive to skin, eyes, and respiratory system Skin contact may result in sensitization.
Component Antimony CAS# 7440-36-0: Oral LD50 7000 mg/kg (rats). The Antimony component of this product exists as a solid solution in tin oxide wherein Antimony ions substitute for tin in the lattice. Repeated exposure of animals by ingestion of Antimony caused reduced weight gain, blood effects and injury to heart muscles.
In humans, prolonged or chronic exposure to antimony fumes or dust may cause skin pustules, bleeding gums, conjunctivitis, laryngitis, headache, weight loss, anemia, pain or tightness in chest, shortness of breath, metallic taste and decreased sense of smell.
Component CAS# 7631-86-9: Oral LD50 >7500 mg/kg (rats)
Component amorphous silica CAS#7631-86-9: Toxic effects described in animals exposed by inhalation of high levels of amorphous silica include pulmonary changes, or mild fibrosis, reversible inflammation, vascular obstruction, emphysema, alveolar dust deposition and lung effects.

SECTION 12. ECOLOGICAL INFORMATION

No data for the product itself.

Component data:

Component CAS# 1477-55-0: Ecotoxicity: Fish: LD50=155.8mg/L; 48 hrs.; Semi Static System Bioconcentration = <.3,<2.7(Carp, Continuous flow system: 6 weeks)

Component 3-Aminomethyl-3,5,5-Trimethyl Cyclohexane: : Biodegradability 42% and is not readily biodegradable. Bioaccumulation: - no significant accumulation of the substance in organisms is to be expected. Mobility: The soil mobility of the substance is only minimally affected by adsorption to soil components. Toxicity to fish: LC50 *Laciscus idus* 110 mg/l (96hr). Toxicity to *Daphnia* NOEC 3 mg/l (504hr). EC50 *Daphnia magna* 23 mg/l (48 hr). ErC50 *scenedesmus subspicatus* 50 mg/l (72 hr). NOEC *scenedesmus subspicatus* 1.5 mg/l (72 hr). Toxicity to bacteria: EC10 *Pseudomonas putida* 1120 mg/l (18 hr).

Component Benzyl Alcohol: EC50 (48hr) 400 mg/l *Daphnia Magna*, EC50 (72hr) 2600 mg/l Algae, Biodegradation BOD₂ 62. Slightly or not bioaccumulative. Toxicity to fish: LC50 (96 hr) 10 mg/l Bluegill sunfish (*Lepomis macrochirus*), LC50 (96hr) 460 ml/l Fathead minnow (*Pimephales promelas*), Toxicity to Algae: IC50 (72hr) 700 mg/l

Component Nonyl Phenol: Ecotoxicity: *Daphnia* EC50: 0.14-0.44 mg/l, 48 hr. Component is not readily biodegradable, log Pow: 3-4. Very toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.. Aquatic Toxicity LC50 96 hr, toxicity rating is <0.10 ppm – extremely toxic

Component Antimony CAS# 7440-36-0: Antimony is moderately toxic (96 hr LC50 1-50 mg/l) The 96 hr LC50 in sheephead minnows is > 6.2 < 8.3 ppm.

SECTION 13. WASTE DISPOSAL

WASTE DISPOSAL METHOD:

DISPOSE OF MATERIAL AS A HAZARDOUS WASTE ACCORDING TO FEDERAL, STATE, AND LOCAL REGULATIONS.

SECTION 14. Transport Information

DOT: UN1760, CORROSIVE LIQUID N.O.S. (CONTAINS M-XYLENE DIAMINE, NONYL PHENOL), 8, PG III, MARINE POLLUTANT

IMO/IMDG : UN1760, CORROSIVE LIQUID N.O.S. (CONTAINS M-XYLENE DIAMINE, NONYL PHENOL), 8, PG III, MARINE POLLUTANT

SECTION 15. REGULATORY INFORMATION

No data for the product itself.

Component data:

Component CAS@ 1477-55-0: Component is listed on the TSCA And Canada DSL inventory. Component is on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

Component 3-Aminomethyl-3,5,5-Trimethyl Cyclohexane: Component CAS# 2855-13-2: Acute health hazard. Ingredients on TSCA. International Chemical status listed/registered – EINECS/ELINCS, DSL, AICS, MITI, TCOL, PICCS, China, New Zealand.

Component Benzyl Alcohol: E20/22 Harmful by inhalation and if swallowed. On TSCA list, on DSL Canada

Component Nonyl Phenol: This component is listed on TSCA, EINECS, ACIS, MITI and Canada DSL lists.

Component CAS# 103-83-3: Component is on the TSCA and DSL Inventory. EINECS Number (EEC)

R23/24/25- Toxic by inhalation, in contact with skin and if swallowed. R34- Causes burns. R52- Harmful to aquatic organisms. R53- May cause long-term adverse effects in the aquatic environment. Japanese Regulatory Data Not available

Component tin oxide CAS# 18282-10-5 and Antimony CAS# 7440-36-0: The Antimony-tin oxide matrix in this product is very insoluble. EPA toxicity characteristic leaching procedure (TCLP) leaching tests have shown that less than 2 mg/l antimony and less than 0.5 mg/l tin are released from this product. FDA extraction tests have shown that less than 2 ppm antimony and less than 40ppm of tin are released from this material. Components are on the TSCA list and Canada DSL

Component Antimony CAS# 7440-36-0: is regulated as a toxic chemical under section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

Component CAS# 12001-26-2: On TSCA list. DSL Canada Listed and is considered an uncontrolled product. Although not on the California Proposition 65 list, it may contain ppm quantities of materials regulated under California's safe drinking water and toxic enforcement act of 1986.

Component CAS# 7631-86-9: Component is on the Minnesota right to know list. Component is on TSCA list and Canada DSL.

SECTION 16. OTHER INFORMATION

DISCLAIMER: The information Contained herein is based on the data available and is believed to be accurate, However, the manufacturer makes no warranty expressed or implied regarding the accuracy of this data or the results obtained from the use thereof. Accordingly, we assume no responsibility for injury from the use of this product.

N/A = Not Available

See Section 1 for date of preparation